

**IEEE 802.11
Wireless Access Method and Physical Layer Specification**

Title: Addition of ASN.1 MIB code to Draft 3.1

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Abstract:

This paper provides ASN.1 code that implements the IEEE 802.11 MIB. The introduction details implementation details and deviations from the OSI specifications.

Action:

Adopt the text additions proposed in this paper for inclusion in P802.11/D4.0.

Introduction:

The Managed Object Class Templates in Chapters 11 (14.4.2) and 13 (13.1) were implemented in the ASN.1 language as a SNMPv2 compliant Management Information Base (MIB). During this implementation, some deviations from the P802.11D3 templates were necessary. These deviations are noted in the next section, Implementation Notes.

Implementation Notes:

1. **Attribute Names** - The ASN.1 language does not support underlines or dashes within attribute names. These have been removed. The attribute Transmitted_MPDU_Count (11.4.4.2.4) has been renamed to aTransmittedFrameCount. Naming conventions were standardized, for example, all attributes start with the letter 'a'.
2. **Attribute Deletions:**
 - **aDTIMInterval** is a duplicate of aDTIMPeriod and has been deleted.
 - **aTransmitEnableStatus** and **aPromiscuousStatus** have been deleted from the latest specification and thus are not included in this MIB implementation.
3. **Attribute Numbering** - Attributes cannot be numbered as zero (0) in ASN.1, only Groups can. The numbering of attributes has been modified accordingly.
4. The MIB has been implemented following SNMPv2 recommendations. Attributes defined as integer that are not enumerated are represented as Integer32. In SNMPv2 the key word INTEGER is reserved for enumerated types only. In SNMPv2 all tables must have an additional attribute of type RowStatus. This attribute controls and displays the status of a row - enable, disable, incomplete.
5. **Multiple Instantiations** - The 802.11 MIB has been designed to support multiple instantiations on a single agent. In some implementations the agent can contain more than one Station card each with its own unique MIB. To support this, most groups have been implemented as two dimensional tables, with one index always being a **TableIndex**. The value of the TableIndex is linked to an unique StationID (Mac Address) of a Station card residing in the agent in a new MIB table: **agStationIDTable**.
6. **agStationIDTable** - Certain implementations of SNMP cannot handle table indices that are not integers. To prevent this problem, all Table Indices are defined as Integer32 and a new Table, agStationIDTable, was added at the end of the MIB to link each unique StationID Mac Address to an integer Index. These indices are used for multiple instantiation of the MIB tables.
7. **ResourceInfo** - this attribute was not implemented as a two dimensional table, since this information will be unique to each agent, whether or not that agent has multiple Station cards.
8. **New Tables** - Since ASN.1 does not allow Tables within Tables, it was necessary to pull certain attributes out of their specified groups and define them as separate items. For example, **aAuthenticationAlgorithms** is defined in section 11.4.1.1.2 as part of the agAuthenticationGrp. However since it is a table in its own right, it has been pulled out of that group. Other tabular attributes that were pulled out of their groups are:
 - aDefault_WEP_Key was pulled out of agPrivacyGrp
 - aWEP_Key_Mapping was pulled out of agPrivacyGrp
 - aGroupAddresses was pulled out of agAddressGrp
 - aRegDomainsSuprt was pulled out of agPhyOperationGrp
 - aSuprtDataRates was pulled out of agPhyRateGrp
 - aSuprtTxAntennas was pulled out of agPhyAntennaGrp

- aSuprtRxAntennas was pulled out of agPhyAntennaGrp
- aDiversitySlctRx was pulled out of agPhyAntennaGrp

9. **Deleted Groups :**

- **agAuthentication_grp** - Since the *aAuthenticationAlgorithms* attribute (Table) had to be pulled out of the agAuthentication_grp, that left only one attribute, aAuthentication_Type. In order to minimize code size, this attribute was moved to the agStation_Config_grp. The agAuthentication_grp was not implemented.
- **agAddressGrp** - Since the *aGroupAddress* attribute is a table it was moved out of this group, leaving only one attribute aMacAddress. In order to minimize code size, the *aMacAddress* attribute was moved to the agOperationGrp and the agAddressGrp was not implemented (again simply to save resources).
- **agStatusGrp** - Since both group attributes **aTransmitEnableStatus** and **aPromiscuousStatus** have been deleted from the latest specification there is no longer a need for this group.

10. **New Groups** - The following new ASN.1 groups were created:

- **agIDGrp** - In order to support multiple instantiations within an agent, the SMT attributes, aCurrentBSS_ID, aCurrent_ESS_ID, which are not grouped in the D3 specification, were placed within a new group, agIDGrp.
- **agActionGrp** - Instead of having two very small groups, each with its own considerable code and processing overhead, All action items for SMT and MAC were combined into one group to allow for multiple instantiation on an agent.
- **agAntennasList** - Instead of having three very small groups, each with its own considerable code and processing overhead, the three tabular antenna lists, aSuprtTxAntennas, aSuprtRxAntennas and aDiversitySlctRx were combined into one new table: agAntennasList.

11. **Moved Attributes** -

- attributes **aManufacturerID** and **aProductID** were not in a group in the D3 specification. In order to allow for multiple instantiation, these attributes were moved to the MAC agOperationGrp.
- **aStationID** - not grouped in the D3 specification, this attribute was moved to the SMT agStationConfigGrp.

12. **Notification attributes** - these attributes are not implemented in the MIB but are performed by the agent implementation.

Text Insertion Follows:**11.4.7 ASN.1 Definitions**

```
-- *****
-- IEEE 802.11 Management Information Base
--
--
-- From Draft Standard IEEE 802.11 p802.11D3
--
-- rwo          1/31/96          Copy prose description from 802.11
--                               spec and start turning into ASN.1
--
-- NOTE: all comments starting with * after the dashes
--       are verbatim copies from the 802.11 spec
-- *****
```

```
IEEE800dot11-MIB DEFINITIONS ::= BEGIN
```

IMPORTS

```
    MODULE-IDENTITY, OBJECT-TYPE, NOTIFICATION-TYPE,
    ObjectName, Integer32, Counter32, snmpModules, Counter64
FROM SNMPv2-SMI
    TruthValue, DisplayString, TestAndIncr, TimeStamp
FROM SNMPv2-TC
    TEXTUAL-CONVENTION, RowStatus
FROM SNMPv2-TC
    MODULE-COMPLIANCE, OBJECT-GROUP
FROM SNMPv2-CONF
    system, ifIndex, egpNeighAddr
FROM RFC1213-MIB
    partyEntry
FROM SNMPv2-PARTY-MIB;
```

```
-- *****
```

```
-- MODULE IDENTITY
```

```
-- *****
```

```
    ieee802dot11 MODULE-IDENTITY
    LAST-UPDATED "9605070000Z"
    ORGANIZATION "XXXXXXXXXX"
    CONTACT-INFO "XXXXXXXXXX"
    DESCRIPTION
        "The MIB module for IEEE 802.11 entities.
        iso(1).member-body(2).us(840).ieee802dot11(10036)"
    ::= { 1 2 840 10036 }
```

```
-- *****
```

```
-- Major sections
```

```
-- *****
```

```
-- Station Management (SMT) Attributes
```

```
--* DEFINED AS "The SMT object class provides the necessary support at the
--* station to manage the processes in the station such that the
--* station may work cooperatively as a part of an 802.11 network.";
```

```

smt OBJECT IDENTIFIER ::= {ieee802dot11 1}

-- * smt GROUPS
--     agStationConfigGrp           smt 1
--     aAuthenticationAlgorithms    smt 2
--     aKnownAPs OBJECT-TYPE        smt 3
--     aDefaultWEPKey OBJECT-TYPE    smt 4
--     aWEPKeyMapping OBJECT-TYPE    smt 5
--     agPrivacyGrp                 smt 6
--     agIDGrp                      smt 7

-- MAC Attributes
--* DEFINED AS "The MAC object class provides the necessary support
--* for the access control, generation and verification of frame check
--* sequences, and proper delivery of valid data to upper layers.";

mac OBJECT IDENTIFIER ::= {ieee802dot11 2}

-- * MAC GROUPS
-- reference IEEE P802.1f-1993
-- agOperationGrp      ::= {mac 1}
-- agCountersGrp      ::= {mac 2}
-- aGroupAddressesGrp ::= {mac 3}
-- agActionGrp        ::= {mac 4}

-- Resource Type ID
res          OBJECT IDENTIFIER ::= {ieee802dot11 3}
resAttribute OBJECT IDENTIFIER ::= {res 8 }

--- PHY group
phy          OBJECT IDENTIFIER ::= {ieee802dot11 4}

--DEFINED AS "The PHY object class provides the necessary support
-- for all the required PHY operational information which may vary from PHY
-- to PHY and from STA to STA to be communicated to upper layers."

-- * phy GROUPS
--     agPhyOperationGrp      ::= {phy 1}
--     agPhyRateGrp           ::= {phy 2}
--     agPhyAntennaGrp        ::= {phy 3}
--     agPhyTxPwrGrp          ::= {phy 4}
--     agPhyFHSSGrp           ::= {phy 5}
--     agPhyDSSSGrp           ::= {phy 6}
--     agPhyStatusGrp         ::= {phy 7}
--     agPhyPwrSavingGrp      ::= {phy 8}
--     aRegDomainsSuprt       ::= {phy 9}
--     aSuprtDataRates        ::= {phy 10}
--     aSuprtTxAntennas       ::= {phy 11}
--     aSuprtRxAntennas       ::= {phy 12}
--     aDiversitySlctRx       ::= {phy 13}

-- Table to link StationID values to a particular Index for all other MIB tables
agStationIDTable OBJECT IDENTIFIER ::= {ieee802dot11 5}

```

..*****

```
-- Textual conventions from 802 definitions
-- *****
-- Power Management, from IEEE P802.11D3 7.1.3.1.7
PowerManagementModetype ::= INTEGER { active (0), powersave (1) }

DefaultWEPKeytype ::= OCTET STRING (SIZE (8))

-- counter types from x.721/DIS 10165-2
-- counters are set to Integer32 instead of Counter so they can be writable
PdusSentCounter ::= Integer32
PdusReceivedCounter ::= Integer32
OctetsSentCounter ::= Integer32
CorruptedPDUsReceivedCounter ::= Integer32

-- *****
-- MIB attribute OBJECT-TYPE definitions follow
-- *****

-- *****
-- SMT Station Config Group Table
--* agStationConfigGrp TABLE
-- *****
agStationConfigGrp OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeagStationConfigGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Station Configuration attributes. In tabular form to
        allow for multiple instances on an agent"
    ::= { smt 1 }

agStationConfigGrpEntry OBJECT-TYPE
    SYNTAX TypeagStationConfigGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the agStationConfigGrp table."
    INDEX { aStationTableIndex }
    ::= { agStationConfigGrp 1 }

TypeagStationConfigGrpEntry ::=
    SEQUENCE {
        aStationTableIndex Integer32,
        aStationID MacAddress,
        aActingasAPStatus INTEGER,
        aActingasWirelessAPStatus INTEGER,
        aAssociatedState INTEGER,
        aBeaconPeriod Integer32,
        aPowerManagementMode INTEGER,
        aPassiveScanDuration INTEGER,
        aListenInterval Integer32,
        aScanMode INTEGER,
        aScanState INTEGER,
        aCFPRate Integer32,
        aCFPMaxDuration Integer32,
```

aDTIMPeriod	Integer32,
aATIMWindow	Integer32,
aMaxMPDUTime	Integer32,
aMediumOccupancyLimit	Integer32,
aCFAware	INTEGER,
aAuthenticationType	INTEGER,
agStationConfigGrpStatus	RowStatus }

```
--*      aStationID
aStationID OBJECT-TYPE
    SYNTAX MacAddress
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The purpose of aStationID is to allow a manager to rename a
        station for its own purposes. This attribute provides for
        that eventuality while keeping the true MAC address
        independent. Its syntax is MAC address and default value is
        the station's MAC address because this is a readily accessible unique value. "
 ::= { agStationConfigGrpEntry 1 }
```

```
--*      aActingasAPStatus
aActingasAPStatus OBJECT-TYPE
    SYNTAX INTEGER { true (1), false (2) }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "True if this station is acting as an Access
        Point, false otherwise. The default value of this attribute shall be false."
 ::= { agStationConfigGrpEntry 2 }
```

```
--*      aActingasWirelessAPStatus
aActingasWirelessAPStatus OBJECT-TYPE
    SYNTAX INTEGER { true (1), false (2) }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This attribute when true, specifies that the station is acting as a
        wireless AP. The default value of this attribute shall be false."
 ::= { agStationConfigGrpEntry 3 }
```

```
--*      aAssociatedState
aAssociatedState OBJECT-TYPE
    SYNTAX INTEGER { true (1), false (2) }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This attribute shall describe the current associated state of
        the station. The default value of this attribute shall be false."
 ::= { agStationConfigGrpEntry 4 }
```

```
--*      aBeaconPeriod
aBeaconPeriod OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
```

STATUS current

DESCRIPTION

"The beacon period shall indicate the time, in kmicroseconds, between the transmission of beacon frames if the station is acting as an Access Point. If the station is not an Access Point but is associated with one, the beacon period shall indicate the time, in kmicroseconds, between the expected arrival of beacon frames. If the station is not an Access Point and is not associated with one, the beacon period shall indicate the time, in kmicroseconds, between the transmission of beacon frames. The default value of this attribute shall be 100."

::= { agStationConfigGrpEntry 5 }

--* aPowerManagementMode

aPowerManagementMode OBJECT-TYPE

SYNTAX INTEGER { active (1), powersave (2) }

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"An enumerated type that describes the current power management mode of the station. The allowable values for this attribute are ACTIVE and POWER SAVE. The default value of this attribute shall be ACTIVE."

::= { agStationConfigGrpEntry 6 }

--* aPassiveScanDuration

aPassiveScanDuration OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This attribute defines the maximum time, in kmicroseconds, that a station will remain on a single channel during a passive scan of that channel. The default value of this attribute shall be 50."

::= { agStationConfigGrpEntry 7 }

--* aListenInterval

aListenInterval OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This attribute specifies the number of Beacon intervals which may pass before the station awakens and listens for the next beacon. The default value of this attribute shall be zero."

::= { agStationConfigGrpEntry 8 }

--* aScanMode

aScanMode OBJECT-TYPE

SYNTAX INTEGER { active (1), passive (2) }

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"ScanMode is an enumerated type that can take on the values ACTIVE or PASSIVE. The default value of this attribute shall be PASSIVE."

::= { agStationConfigGrpEntry 9 }

--* aScanState

aScanState OBJECT-TYPE

SYNTAX INTEGER { true (1), false (2) }

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This attribute shall indicate when a station is scanning. The value of this attribute shall be TRUE when a station is scanning. It shall be false otherwise. The default value of this attribute shall be false."

::= { agStationConfigGrpEntry 10 }

--* aCFPRate

aCFPRate OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This attribute indicates the number of beacon intervals between the beacons that start contention free periods. The default value of this attribute shall be 5."

::= { agStationConfigGrpEntry 11 }

--* aCFPMaxDuration

aCFPMaxDuration OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This attribute indicates the maximum amount of time, in units of 1024 microseconds, between the end of the beacon frame that starts a contention free period and the end of the CFPEnd or CFPEnd+Ack frame that ends the contention free period. The default value of this attribute shall be twice aMAXMPDUTime."

::= { agStationConfigGrpEntry 12 }

--* aDTIMPeriod

aDTIMPeriod OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This attribute indicates the number of beacon intervals between beacon frames which contain DTIMs. If this DTIMInterval is one, there is a DTIM in every beacon frame. The default value of this attribute shall be 5."

::= { agStationConfigGrpEntry 13 }

--* aATIMWindow

aATIMWindow OBJECT-TYPE
SYNTAX Integer32
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "This attribute defines the period of time, in microseconds, after a target beacon transmission time in an IBSS during which stations buffering frames for Power Save mode stations will attempt to notify those stations by transmitting an ATIM frame. The ATIM window begins at the Target Beacon Time. The default value of this attribute shall be 1000."
 ::= { agStationConfigGrpEntry 14 }

--* aMaxMPDUTime
aMaxMPDUTime OBJECT-TYPE
SYNTAX Integer32
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "This attribute indicates the length of time, in microseconds, to transmit an MPDU of length aFragmentationThreshold octets, including all PHY framing overhead, plus the value of aDIFS, plus the value of aCWmax."
 ::= { agStationConfigGrpEntry 15 }

--* aMediumOccupancyLimit
aMediumOccupancyLimit OBJECT-TYPE
SYNTAX Integer32
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "This attribute indicates the maximum amount of time, in units of 1024 microseconds, that a point coordinator may control the usage of the wireless medium without relinquishing control for long enough to allow at least one instance of DCF access to the medium. The default value of this attribute shall be 100. The maximum value of this attribute shall be 1000."
 ::= { agStationConfigGrpEntry 16 }

--* aCFAware
aCFAware OBJECT-TYPE
SYNTAX INTEGER { true (1), false (2) }
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "When true, this attribute indicates that the station is able to respond to a CF-Poll with a data frame within a SIFS time. This attribute shall be false if the station is not able to respond to a CF-Poll with a data frame within a SIFS time."
 ::= { agStationConfigGrpEntry 17 }

--* aAuthenticationType

aAuthenticationType OBJECT-TYPE
 SYNTAX INTEGER (1..2)
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This attribute shall indicate the authentication algorithm used during the authentication sequence. The value of this attribute shall be selected from the set in the aAuthenticationAlgorithms attribute. The default value of this attribute shall be 1."
 REFERENCE "IEEE P802.11D3 11.4.4.1.11"
 ::= { agStationConfigGrpEntry 18 }

agStationConfigGrpStatus OBJECT-TYPE
 SYNTAX RowStatus
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "The status column used for creating, modifying, and deleting instances of the columnar objects in the agStationConfigGrp table."
 DEFVAL { active }
 ::= { agStationConfigGrpEntry 19 }

aStationTableIndex OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The index used to access rows in the agStationConfigGrp table, it is associated with a particular StationID as a MAC Address. See agStationTable table above."
 ::= { agStationConfigGrpEntry 20 }

-- *****
 --* End of agStationConfigGrp TABLE
 -- *****

-- *****
 --* AuthenticationAlgorithms TABLE
 -- *****

aAuthenticationAlgorithms OBJECT-TYPE
 SYNTAX SEQUENCE OF SmtAuthenticationAlgorithmsEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "This (conceptual) table of attributes shall be a set of all the authentication algorithms supported by the stations. The following are the default values and the associated algorithm.
 Value = 1: Open System
 Value = 2: Shared Key"
 REFERENCE "IEEE P802.11D3 11.4.4.1.9"
 ::= { smt 2 }

aAuthenticationAlgorithmsEntry OBJECT-TYPE

SYNTAX SmtAuthenticationAlgorithmsEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "An Entry (conceptual row) in the Auth. Algorithms Table"
 INDEX { aStationTableIndex,
 aAuthenticationAlgorithm }
 ::= { aAuthenticationAlgorithms 1 }

SmtAuthenticationAlgorithmsEntry ::= SEQUENCE {
 aAuthenticationAlgorithmsTableIndex Integer32,
 aAuthenticationAlgorithmsIndex INTEGER,
 aAuthenticationAlgorithm INTEGER,
 aAuthenticationAlgorithmsStatus RowStatus }

aAuthenticationAlgorithmsTableIndex OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The index used to access rows in the agStationConfigGrp
 table, it is associated with a particular StationID as a MAC
 Address. See agStationTable table above."
 ::= { aAuthenticationAlgorithmsEntry 1 }

aAuthenticationAlgorithmsIndex OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The auxillary variable used to identify instances
 of the columnar objects in the algorithm table."
 ::= { aAuthenticationAlgorithmsEntry 2 }

aAuthenticationAlgorithm OBJECT-TYPE
 SYNTAX INTEGER { openSystem (1), sharedKey (2) }
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "This attribute shall be an
 authentication algorithms supported by a station. The
 following are the default values and the associated algorithm.
 Value = 1: Open System
 Value = 2: Shared Key"
 ::= { aAuthenticationAlgorithmsEntry 3 }

aAuthenticationAlgorithmsStatus OBJECT-TYPE
 SYNTAX RowStatus
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "The status column used for creating, modifying, and deleting
 instances of the columnar objects in the auth. algorithm table."
 DEFVAL { active }
 ::= { aAuthenticationAlgorithmsEntry 4 }

```
-- *****
--*      End of AuthenticationAlgorithms TABLE
-- *****
```

```
-- *****
--*      agIDGrp TABLE
-- *****
```

```
agIDGrp OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeagIDGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "802.11 SMT group containing attributes containing ID
        information, implemented as a tabular object so it can be
        multiply instantiated in an agent "
    ::= { smt 7 }
```

```
agIDGrpEntry OBJECT-TYPE
    SYNTAX TypeagIDGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the agIDGrp table."
    INDEX { agIDGrpTableIndex }
    ::= { agIDGrp 1 }
```

```
TypeagIDGrpEntry ::= SEQUENCE {
    agIDGrpTableIndex      Integer32,
    aCurrentAPMacAddress   MacAddress,
    aCurrentBSSID         MacAddress,
    aCurrentESSID         OCTET STRING,
    aDesiredSSID          OCTET STRING,
    agIDGrpStatus         RowStatus      }
```

```
agIDGrpTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the agIDGrp table."
    ::= { agIDGrpEntry 1 }
```

```
--*      aCurrentAPMacAddress
aCurrentAPMacAddress OBJECT-TYPE
    SYNTAX MacAddress
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "If aActingasAPStatus is false (i.e. current entity is a
        non-AP station), then attribute aCurrentAPMacAddress is
        the value of the associated Access Point. This attribute is not
        applicable in a station where aActingasAPStatus is TRUE."
    ::= { agIDGrpEntry 2 }
```

```
--* aCurrentBSSID
aCurrentBSSID OBJECT-TYPE
    SYNTAX MacAddress
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This attribute shall identify the basic service set
        (BSS) with which the station is currently associated. The
        default value of this attribute shall be null."
    ::= { agIDGrpEntry 3 }
```

```
--* aCurrentESSID
aCurrentESSID OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE(0..32))
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This attribute shall identify the extended service set (ESS)
        with which the station is associated, if any. The default
        value of this attribute shall be null."
    REFERENCE "IEEE P802.11D3 7.3.2.2"
    ::= { agIDGrpEntry 4 }
```

```
--* aDesiredSSID
aDesiredSSID OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE(0..32))
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This attribute shall contain the ID of the extended service
        set (ESS) of which the station is to become a member. A zero
        value indicates that the station may join, or start, and ESS
        with any ESSID. A non-zero value indicates that the station
        shall only join, or start, a BSS with this ESS ID. The
        default value of this attribute shall be null."
    REFERENCE "IEEE P802.11D3 7.3.2.2"
    ::= { agIDGrpEntry 5 }
```

```
agIDGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
        instances of the columnar objects in the agIDGrp table."
    DEFVAL { active }
    ::= { agIDGrpEntry 6 }
```

```
-- *****
--* End of agIDGrp TABLE
-- *****
```

```
-- *****
--* aKnownAPs TABLE
```

-- *****

```

aKnownAPs OBJECT-TYPE
    SYNTAX SEQUENCE OF SmtKnownAPsEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "A Table of identities of the most recently know Access Points."
    ::= { smt 3 }

aKnownAPsEntry OBJECT-TYPE
    SYNTAX SmtKnownAPsEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "A Known APs Entry."
    INDEX { aKnownAPsTableIndex, aKnownAPsIndex }
    ::= { aKnownAPs 1 }

SmtKnownAPsEntry ::= SEQUENCE {
    aKnownAPsTableIndex Integer32,
    aKnownAPsIndex      Integer32,
    aKnownAPsValue      MacAddress,
    aKnownAPsStatus     RowStatus }

aKnownAPsTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the Known AP table."
    ::= { aKnownAPsEntry 1 }

aKnownAPsIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the Known AP table."
    ::= { aKnownAPsEntry 2 }

aKnownAPsValue OBJECT-TYPE
    SYNTAX MacAddress
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This attribute shall be a set of the identities of the most
        recently known Access Points. Access Points may be included in
        this list even if the station did not associate with them. A
        station may delete AP identities from this set using any
        algorithm of its choosing. The set may include fewer AP
        identities than the number of APs the station has encountered.
        The default value of this attribute shall be null. "
    ::= { aKnownAPsEntry 3 }

```

```

aKnownAPsStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
        instances of the columnar objects in the known AP table."
    DEFVAL { active }
    ::= { aKnownAPsEntry 4 }
-- *****
--*      End of KnownAPs TABLE
-- *****

-- *****
--*      agPrivacyGrp TABLE
-- *****

agPrivacyGrp OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeagPrivacyGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Group containing attributes concerned with 802.11
        Privacy. Created as a table to allow multiple
        instantiations on an agent"
    ::= { smt 6 }

agPrivacyGrpEntry OBJECT-TYPE
    SYNTAX TypeagPrivacyGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the agPrivacyGrp table."
    INDEX { agPrivacyGrpTableIndex }
    ::= { agPrivacyGrp 1 }

TypeagPrivacyGrpEntry ::= SEQUENCE {
    agPrivacyGrpTableIndex      Integer32,
    aPrivacyOptionImplemented  INTEGER,
    aPrivacyInvoke              INTEGER,
    aWEPDefault                 INTEGER,
    aExcludeUnencrypted         INTEGER,
    aICVerrorCount              Integer32,
    agPrivacyGrpStatus          RowStatus }

agPrivacyGrpTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the agPrivacyGrp table."
    ::= { agPrivacyGrpEntry 1 }

```



```

--*      aPrivacyOptionImplemented
aPrivacyOptionImplemented OBJECT-TYPE
    SYNTAX INTEGER { true (1), false (2)}
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This attribute, when true, shall indicate that the 802.11 WEP option
        is implemented. The default value of this attribute shall be false."
    ::= { agPrivacyGrpEntry 2}

--*      aPrivacyInvoke
aPrivacyInvoke OBJECT-TYPE
    SYNTAX INTEGER { true (1), false (2) }
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "When this attribute is true it shall indicate that the 802.11 WEP
        mechanism is invoked. The default value of this attribute shall be false."
    ::= { agPrivacyGrpEntry 3}

--*      aWEPDefault
aWEPDefault OBJECT-TYPE
    SYNTAX INTEGER (0..4)
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This attribute shall indicate the use of the corresponding
        element of the DefaultWEPKey array when set to values of
        one, two, three or four or that the DefaultWEPKey values are not to
        be used when set to zero. The default value of
        this attribute shall be 0."
    REFERENCE "IEEE P802.11D3 8.3.2"
    ::= { agPrivacyGrpEntry 4}

--*      aExcludeUnencrypted
aExcludeUnencrypted OBJECT-TYPE
    SYNTAX INTEGER { true (1), false (2) }
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "When this attribute is true, the station shall discard
        received MSDUs that have the WEP Frame Control bit equal to
        zero. When this attribute is false, the station may accept
        MSDUs that have the WEP Frame Control bit equal to zero."
    ::= { agPrivacyGrpEntry 5}

aICVErrorCount OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This counter shall increment when a frame is received
        with the WEP bit set in the frame control field and the
        value of the ICV as received in the frame does not match
        the ICV as it is currently calculated."

```

```

 ::= { agPrivacyGrpEntry 6}

agPrivacyGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
        instances of the columnar objects in the agPrivacyGrp table."
    DEFVAL { active}
    ::= { agPrivacyGrpEntry 7}
-- *****
--*      End of agPrivacyGrp TABLE
-- *****

-- *****
--*      DefaultWEPKey TABLE
-- *****

aDefaultWEPKey OBJECT-TYPE
    SYNTAX SEQUENCE OF ADefaultWEPKeyEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Conceptual table for WEP Key Mapping.
        This table shall contain the four default WEP secret key
        values corresponding to the four possible KeyID values. The
        default value of this attribute shall be null."
    REFERENCE "IEEE 802.11D3 11.4.4.1.13"
    ::= { smt 4 }

aDefaultWEPKeyEntry OBJECT-TYPE
    SYNTAX ADefaultWEPKeyEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An Entry (conceptual row) in the Default WEP Key Table"
    INDEX { aDefaultWEPKeyTableIndex, aDefaultWEPKeyIndex }
    ::= { aDefaultWEPKey 1 }

ADefaultWEPKeyEntry ::= SEQUENCE {
    aDefaultWEPKeyTableIndex      Integer32,
    aDefaultWEPKeyIndex          INTEGER,
    aDefaultWEPKeyValue          DefaultWEPKeytype,
    aDefaultWEPKeyStatus         RowStatus}

aDefaultWEPKeyTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the Default WEP Key table."
    ::= { aDefaultWEPKeyEntry 1 }

aDefaultWEPKeyIndex OBJECT-TYPE

```

SYNTAX INTEGER (1..4)
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "The auxillary variable used to identify instances
 of the columnar objects in the Default WEP Key table."
 ::= { aDefaultWEPKeyEntry 2 }

aDefaultWEPKeyValue OBJECT-TYPE
 SYNTAX DefaultWEPKeytype
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "A default WEP secret key value OCTET STRING (SIZE(8))."
 ::= { aDefaultWEPKeyEntry 3 }

aDefaultWEPKeyStatus OBJECT-TYPE
 SYNTAX RowStatus
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "The status column used for creating, modifying, and
 deleting instances of the columnar objects in the Default WEP Key table."
 DEFVAL { active }
 ::= { aDefaultWEPKeyEntry 4 }

-- *****
 --* End of DefaultWEPKey TABLE
 -- *****

-- *****
 --* WEPKeyMapping TABLE
 -- *****

aWEPKeyMapping OBJECT-TYPE
 SYNTAX SEQUENCE OF SmtWEPKeyMappingEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "Conceptual table for WEP Key Mapping.
 The MIB supports the ability to have a separate WEP key for
 each station to which a Station directly communicates. This
 two dimensional array is indexed by MAC address and contains
 two fields for each entry: WEP_ON and the corresponding WEP
 key. The MIB shall not allow WEP_ON to be set to TRUE if the
 corresponding WEP_Key entry is Null. The default value for
 all WEP_ON fields is FALSE."
 REFERENCE "IEEE P802.11D3 8.3.2"
 ::= { smt 5 }

aWEPKeyMappingEntry OBJECT-TYPE
 SYNTAX SmtWEPKeyMappingEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "An Entry (conceptual row) in the WEP Key Mapping Table"
 INDEX { aWEPKeyMappingTableIndex, aWEPKeyMappingIndex }

::= { aWEPKeyMapping 1 }

SmtWEPKeyMappingEntry ::= SEQUENCE {
 aWEPKeyMappingTableIndex Integer32,
 aWEPKeyMappingIndex Integer32,
 aWEPKeyMappingKeyOn INTEGER,
 aWEPKeyMappingWEPkey INTEGER,
 aWEPKeyMappingStatus RowStatus }

aWEPKeyMappingTableIndex OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "The auxillary variable used to identify instances
 of the columnar objects in the WEP Key Mapping table."
 ::= { aWEPKeyMappingEntry 1 }

aWEPKeyMappingIndex OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "The auxillary variable used to identify instances
 of the columnar objects in the WEP Key Mapping table."
 ::= { aWEPKeyMappingEntry 2 }

aWEPKeyMappingKeyOn OBJECT-TYPE
 SYNTAX INTEGER { true(1), false(2) }
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "Boolean as to whether WEP is being used at the
 Indexed MacAddress Station."
 ::= { aWEPKeyMappingEntry 3 }

aWEPKeyMappingWEPkey OBJECT-TYPE
 SYNTAX INTEGER (0..4)
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "Entry in Default WEP Key table - selects which of 4
 secret keys should be used."
 ::= { aWEPKeyMappingEntry 4 }

aWEPKeyMappingStatus OBJECT-TYPE
 SYNTAX RowStatus
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "The status column used for creating, modifying, and
 deleting instances of the columnar objects in the
 WEP Key Mapping table."
 DEFVAL { active }
 ::= { aWEPKeyMappingEntry 5 }

```

-- *****
--*      End of WEPKeyMapping TABLE
-- *****

-- *****
--*      MAC Attribute Templates
-- *****

-- *****
--*      GroupAddresses TABLE
-- *****
aGroupAddresses OBJECT-TYPE
    SYNTAX SEQUENCE OF GroupAddressEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "A conceptual table containing a
        set of MacAddresses identifying the multicast addresses
        for which this station will receive frames. The default
        value of this attribute shall be null."
    ::= { mac 3 }

aGroupAddressesEntry OBJECT-TYPE
    SYNTAX GroupAddressEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An Entry (conceptual row) in the Group Addresses Table"
    INDEX { aGroupAddressesTableIndex, aGroupAddressesIndex }
    ::= { aGroupAddresses 1 }

GroupAddressEntry ::= SEQUENCE {
    aGroupAddressesTableIndex    Integer32,
    aGroupAddressesIndex        Integer32,
    aGroupAddress                MacAddress,
    aGroupAddressesStatus       RowStatus }

aGroupAddressesTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the Group Addresses table."
    ::= { aGroupAddressesEntry 1 }

aGroupAddressesIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the Group Addresses table."
    ::= { aGroupAddressesEntry 2 }

```

```

aGroupAddress OBJECT-TYPE
    SYNTAX MacAddress
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "MacAddresses identifying a multicast addresses
        from which this station will receive frames."
    ::= { aGroupAddressesEntry 3 }
    
```

```

aGroupAddressesStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and
        deleting instances of the columnar objects in the
        Group Addresses table."
    DEFVAL { active }
    ::= { aGroupAddressesEntry 4 }
    
```

```

-- *****
--*      End of GroupAddress TABLE
-- *****
    
```

```

-- *****
--*      agOperationGrp TABLE
-- *****
    
```

```

agOperationGrp OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeagOperationGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Group contains MAC attributes pertaining to the Operation of
        the MAC. This has been implemented as a table in order to
        allow for multiple instantiations on an agent"
    ::= { mac 1 }
    
```

```

agOperationGrpEntry OBJECT-TYPE
    SYNTAX TypeagOperationGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the agOperationGrp table."
    INDEX { agOperationGrpTableIndex }
    ::= { agOperationGrp 1 }
    
```

```

TypeagOperationGrpEntry ::= SEQUENCE {
agOperationGrpTableIndex      Integer32,
    aRateFactor                Integer32,
    aHandshakeoverhead        Integer32,
    aRTSThreshold              Integer32,
    aCWmax                     Integer32,
    aCWmin                     Integer32,
    aCTSTime                   Integer32,
    aACKTime                   Integer32,
    
```

```

aACKTimeout                Integer32,
aShortRetryLimit           Integer32,
aLongRetryLimit            Integer32,
aMaxFrameLength            Integer32,
aFragmentationThreshold   Integer32,
aProbeDelay                 Integer32,
aMinProbeResponseTime     Integer32,
aMaxProbeResponseTime     Integer32,
--
aDTIMInterval              Integer32,
aMaxTransmitMSDULifetime  Integer32,
aMaxReceiveMSDULifetime   Integer32,
aMacAddress                 MacAddress,
aManufacturerID            OctetString,
aProductID                 OctetString,
agOperationGrpStatus       RowStatus }

```

agOperationGrpTableIndex OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The auxillary variable used to identify instances
of the columnar objects in the agOperationGrp table."

::= { agOperationGrpEntry 1 }

--* aRateFactor

aRateFactor OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This attribute indicates the current rate (in bytes per
second) at which data is transferred across the medium.

The default value of this attribute shall be 1 000 000."

::= { agOperationGrpEntry 2 }

--* aHandshakeoverhead

aHandshakeoverhead OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This attribute is the amount of time, in microseconds,
required to complete an RTS/CTS handshake. This value, along
with the RateFactor, may be used to determine the desirable
setting of the RTSThreshold to maximize data throughput."

::= { agOperationGrpEntry 3 }

--* aRTSThreshold

aRTSThreshold OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This attribute indicates the number of bytes in an MPDU,

below which an RTS/CTS handshake will not be performed. An RTS/CTS handshake shall be performed for all frames where the length of the MPDU is equal to or larger than this threshold. Setting this attribute to be larger than the maximum MSDU size will have the effect of turning off the RTS/CTS handshake for frames transmitted by this station. Setting this attribute to zero will have the effect of turning on the RTS/CTS handshake for all MPDUs for frames transmitted by this station. The default value of this attribute shall be 2305."

::= { agOperationGrpEntry 4 }

--* aCWmax

aCWmax OBJECT-TYPE

SYNTAX Integer32
MAX-ACCESS read-write
STATUS current
DESCRIPTION

"This attribute indicates the maximum size of the contention window, in slots. The default value of this attribute shall be 255."

::= { agOperationGrpEntry 5 }

--* aCWmin

aCWmin OBJECT-TYPE

SYNTAX Integer32
MAX-ACCESS read-write
STATUS current
DESCRIPTION

"This attribute indicates the minimum size of the contention window, in slots. The default value of this attribute shall be 7."

::= { agOperationGrpEntry 6 }

--* aCTSTime

aCTSTime OBJECT-TYPE

SYNTAX Integer32
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"This attribute indicates the length of time, in microseconds, it takes to transmit a CTS frame."

::= { agOperationGrpEntry 7 }

--* aACKTime

aACKTime OBJECT-TYPE

SYNTAX Integer32
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"This attribute indicates the length of time, in microseconds, it takes to transmit an ACK frame."

::= { agOperationGrpEntry 8 }

--* aACKTimeout

aACKTimeout OBJECT-TYPE

SYNTAX Integer32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "This attribute specifies the length of time, in
 microseconds, in which an ACK frame will be received in
 response to transmission of a frame which requires
 acknowledgment, timed from receipt of PHYDATA.confirm at
 the MAC. The following equation is used to determine
 aACKTimeout: --* aSIFSTime+aACKTime"
 ::= { agOperationGrpEntry 9 }

--* aShortRetryLimit
aShortRetryLimit OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This attribute indicates the maximum number of
 transmission attempts of a frame, the length of which is
 less than or equal to aFragmentationThreshold, that will
 be made before a failure condition is indicated. The
 default value of this attribute shall be 5."
 ::= { agOperationGrpEntry 10 }

--* aLongRetryLimit
aLongRetryLimit OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This attribute indicates the maximum number of
 transmission attempts of a frame, the length of which is
 greater than aFragmentationThreshold, that will be made
 before a failure condition is indicated. The default
 value of this attribute shall be 7."
 ::= { agOperationGrpEntry 11 }

--* aMaxFrameLength
aMaxFrameLength OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "This attribute specifies the maximum MSDU length that
 will be accepted for transmission. The value of this
 attribute shall be 2304 octets."
 ::= { agOperationGrpEntry 12 }

--* aFragmentationThreshold
aFragmentationThreshold OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION

"This attribute specifies the current maximum size, in octets, of the MPDU that will be delivered to the PHY. An MSDU will be broken into fragments if its size exceeds the value of this attribute after adding MAC headers and trailers. The default value for this attribute shall be equal to the maximum size PSDU of the attached PHY and shall never exceed the maximum size PSDU of the attached PHY. The value of this attribute shall never be less than 256. The default value of this attribute shall be 2304."

::= { agOperationGrpEntry 13 }

--* aProbeDelay

aProbeDelay OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The ProbeDelay shall be the minimum time, in microseconds, that a station shall wait on a channel prior to transmitting a Probe frame during active scanning. The default value of this attribute shall be zero."

::= { agOperationGrpEntry 14 }

--* aMinProbeResponseTime

aMinProbeResponseTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The MinProbeResponseTime shall be the minimum time, in kmicroseconds, a station shall wait to detect activity on a channel while waiting for a Probe Response. The default value of this attribute shall be 5."

::= { agOperationGrpEntry 15 }

--* aMaxProbeResponseTime

aMaxProbeResponseTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The MaxProbeResponseTime shall be the minimum time, in kmicroseconds, a station shall wait for a Probe Response given that activity has been detected on the channel. The default value of this attribute shall be 50."

::= { agOperationGrpEntry 16 }

--* aMaxTransmitMSDULifetime

aMaxTransmitMSDULifetime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The MaxTransmitMSDULifetime shall be the elapsed time in kmicroseconds, after the initial transmission of an MSDU,

that further attempts to transmit the MSDU shall be terminated. The default value of this attribute shall be 512."
 ::= { agOperationGrpEntry 17 }

--* aMaxReceiveMSDULifetime
 aMaxReceiveMSDULifetime OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 " The MaxReceiveMSDULifetime shall be the elapsed time in
 kmicroseconds, after the intital reception of a fragmented
 MSDU, that further attempts to reassemble the MSDU shall
 be terminated. The default value shall be 512. "
 ::= { agOperationGrpEntry 18 }

--* aMacAddress
 aMacAddress OBJECT-TYPE
 SYNTAX MacAddress
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION "Current MAC Address"
 ::= { agOperationGrpEntry 19 }

--* aManufacturerID
 aManufacturerID OBJECT-TYPE
 SYNTAX OCTET STRING
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The ManufacturerID shall include, at a minimum, the name
 of the manufacturer. It may include additional
 information at the manufacturer's discretion. The default
 value of this attribute shall be null."
 ::= { agOperationGrpEntry 20 }

--* aProductID
 aProductID OBJECT-TYPE
 SYNTAX OCTET STRING
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The ProductID shall include, at a minimum, an identifier
 that is unique to the manufacturer. It may include
 additional information at the manufacturer's discretion.
 The default value of this attribute shall be null."
 ::= { agOperationGrpEntry 21 }

agOperationGrpStatus OBJECT-TYPE
 SYNTAX RowStatus
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "The status column used for creating, modifying, and
 deleting instances of the columnar objects in the

```

    agOperationGrp table."
    DEFVAL {active}
    ::= { agOperationGrpEntry 22 }
-- *****
--*   End of agOperationGrp TABLE
-- *****

-- *****
--*   agCountersGrp TABLE
-- *****

    agCountersGrp OBJECT-TYPE
        SYNTAX SEQUENCE OF TypeagCountersGrpEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "Group containing attributes that are MAC counters.
            Implemented as a table to allow for multiple instantiations
            on an agent."
        ::= { mac 2 }

    agCountersGrpEntry OBJECT-TYPE
        SYNTAX TypeagCountersGrpEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "An entry in the agCountersGrp table."
        INDEX { agCountersGrpTableIndex }
        ::= { agCountersGrp 1 }

TypeagCountersGrpEntry ::= SEQUENCE {
    agCountersGrpTableIndex      Integer32,
    aTransmittedFrameCount      Integer32,
    aTransmittedMSDUCount       Integer32,
    aOctetsTransmittedCount      Integer32,
    aMulticastTransmittedFrameCount PdusSentCounter,
    aBroadcastTransmittedFrameCount PdusSentCounter,
    aFailedCount                 Integer32,
    aRetryCount                  Integer32,
    aMultipleRetryCount          Integer32,
    aRTSSuccessCount             Integer32,
    aRTSFailureCount             Integer32,
    aACKFailureCount             Integer32,
    aReceivedFrameCount          PdusReceivedCounter,
    aOctetsReceivedCount         OctetsSentCounter,
    aMulticastReceivedFrameCount PdusReceivedCounter,
    aBroadcastReceivedFrameCount PdusReceivedCounter,
    aErrorCount                  CorruptedPDUsReceivedCounter,
    aFCSErrorsCount              Integer32,
    aFrameDuplicateCount         Integer32,
    aTotalBackoffTime            Integer32,
    agCountersGrpStatus          RowStatus }

    agCountersGrpTableIndex OBJECT-TYPE
        SYNTAX Integer32
        MAX-ACCESS read-write

```

STATUS current
 DESCRIPTION
 "The auxillary variable used to identify instances
 of the columnar objects in the agCountersGrp table."
 ::= { agCountersGrpEntry 1 }

aTransmittedFrameCount OBJECT-TYPE
 SYNTAX PdusSentCounter
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This attribute counts the frames that have been
 transmitted successfully."
 ::= { agCountersGrpEntry 2 }

--* aTransmittedMSDUCount
 aTransmittedMSDUCount OBJECT-TYPE
 SYNTAX PdusSentCounter
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This attribute counts the MSDUs that have been
 transmitted successfully."
 ::= { agCountersGrpEntry 3 }

--*
 --* aOctetsTransmittedCount
 aOctetsTransmittedCount OBJECT-TYPE
 SYNTAX OctetsSentCounter
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This attribute counts the Octets that have been
 transmitted successfully."
 ::= { agCountersGrpEntry 4 }

--* aMulticastTransmittedFrameCount
 aMulticastTransmittedFrameCount OBJECT-TYPE
 SYNTAX PdusSentCounter
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This counter shall increment only when the
 multicast/broadcast bit is set in the destination MAC
 address and the destination MAC address is not the
 broadcast address."
 ::= { agCountersGrpEntry 5 }

--* aBroadcastTransmittedFrameCount
 aBroadcastTransmittedFrameCount OBJECT-TYPE
 SYNTAX PdusSentCounter
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This counter shall increment only when the destination

MAC address is the broadcast address."
 ::= { agCountersGrpEntry 6 }

--* aFailedCount
 aFailedCount OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This counter shall increment when a frame is not transmitted due to the number of transmit attempts exceeding the retrymax value."
 ::= { agCountersGrpEntry 7 }

--* aRetryCount
 aRetryCount OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This counter shall increment when a frame is successfully transmitted after one or more retransmissions."
 ::= { agCountersGrpEntry 8 }

--* aMultipleRetryCount
 aMultipleRetryCount OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This counter shall increment when a frame is successfully transmitted after more than one retransmission."
 ::= { agCountersGrpEntry 9 }

--* aRTSSuccessCount
 aRTSSuccessCount OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This counter shall increment when a CTS is received to a RTS."
 ::= { agCountersGrpEntry 10 }

--* RTSTFailureCount
 aRTSTFailureCount OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This counter shall increment when a CTS is not received to a RTS."
 ::= { agCountersGrpEntry 11 }

--* ACKFailureCount
 aACKFailureCount OBJECT-TYPE
 SYNTAX Integer32

MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This counter shall increment when an ACK is not received
 to a unicast DATA frame."
 ::= { agCountersGrpEntry 12 }

--* aReceivedFrameCount
 aReceivedFrameCount OBJECT-TYPE
 SYNTAX PdupReceivedCounter
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This attribute counts the Frames that have been received successfully."
 ::= { agCountersGrpEntry 13 }

--* aOctetsReceivedCount
 aOctetsReceivedCount OBJECT-TYPE
 SYNTAX OctetsSentCounter
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This attribute counts the Octets that have been received successfully."
 ::= { agCountersGrpEntry 14 }

--* aMulticastReceivedFrameCount
 aMulticastReceivedFrameCount OBJECT-TYPE
 SYNTAX PdupReceivedCounter
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This counter shall increment when a frame is received
 with the multicast/broadcast bit set in the destination
 MAC address, the destination MAC address is not the
 broadcast address and the destination address is in the
 set of GroupAddresses."
 ::= { agCountersGrpEntry 15 }

--* aBroadcastReceivedFrameCount
 aBroadcastReceivedFrameCount OBJECT-TYPE
 SYNTAX PdupReceivedCounter
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This counter shall increment when a frame is received
 with the destination MAC address equal to the broadcast
 address."
 ::= { agCountersGrpEntry 16 }

--* aErrorCount
 aErrorCount OBJECT-TYPE
 SYNTAX CorruptedPDUsReceivedCounter
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION

```

                "This counter shall increment when an error is detected in a received frame."
                ::= { agCountersGrpEntry 17 }

--*      aFCSErrorCount
aFCSErrorCount OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This counter shall increment when an FCS error is
        detected in a received frame."
    ::= { agCountersGrpEntry 18 }

--*      aFrameDuplicateCount
aFrameDuplicateCount OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
-- GET-REPLACE
    STATUS current
    DESCRIPTION
        "This counter shall increment when a frame is received which
        the Sequence Control field indicates is a duplicate."
    ::= { agCountersGrpEntry 19 }

--*      aTotalBackoffTime
aTotalBackoffTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This attribute indicates the length of time, in number of
        slots, the MAC has spent in a backoff condition. The default
        value of this attribute shall be zero."
    ::= { agCountersGrpEntry 20 }

agCountersGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
        instances of the columnar objects in the agCountersGrp table."
    DEFVAL { active }
    ::= { agCountersGrpEntry 21 }
-- *****
--*      End of agCountersGrp TABLE
-- *****

-- *****
--*      Action Templates
-- *****
-- *****
--*      agActionGrp TABLE
-- *****
agActionGrp OBJECT-TYPE

```


SYNTAX SEQUENCE OF TypeagActionGrpEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "Group contains action attributes for both SMT and MAC variables. Implemented as a table to allow for multiple instantiation on Station ID."
 ::= { mac 4 }

agActionGrpEntry OBJECT-TYPE
 SYNTAX TypeagActionGrpEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "An entry in the agActionGrp table."
 INDEX { agActionGrpTableIndex }
 ::= { agActionGrp 1 }

TypeagActionGrpEntry ::= SEQUENCE {
 agActionGrpTableIndex Integer32,
 actInitializeSMT INTEGER,
 actInitializeMAC INTEGER,
 actAddGroupAddress MacAddress,
 actDeleteGroupAddress MacAddress,
 agActionGrpStatus RowStatus }

agActionGrpTableIndex OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "The auxillary variable used to identify instances of the columnar objects in the agActionGrp table."
 ::= { agActionGrpEntry 1 }

--* SMT Action Template
 --* acInitializeSMT
 actInitializeSMT OBJECT-TYPE
 SYNTAX INTEGER { true(1), false(2) }
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "The InitializeSMT action establishes the state of the station management function and the SMT attributes prior to beginning operation. This action shall initialize the SMT attributes with their default values as described in clause 11.4.4.1 except as may be provided as parameters to this action."
 ::= { agActionGrpEntry 2 }

-- actInitializeMAC
 actInitializeMAC OBJECT-TYPE
 SYNTAX INTEGER { true(1), false(2) }
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION

```

        "The InitializeMAC action establishes the state of the MAC
        entity and the MAC attributes prior to beginning
        operation. This action shall initialize the MAC
        attributes with their default values as described in
        clause 11.4.4.2 except as may be provided as parameters to
        this action. All MAC counters shall be reset."
        ::= { agActionGrpEntry 3 }

-- actAddGroupAddress
actAddGroupAddress OBJECT-TYPE
    SYNTAX MacAddress
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The AddGroupAddress action shall add the specified group
        address to the list of group addresses that will be
        accepted by the station."
    ::= { agActionGrpEntry 4 }

--* actDeleteGroupAddress
actDeleteGroupAddress OBJECT-TYPE
    SYNTAX MacAddress
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The DeleteGroupAddress action shall remove the specified
        group address from the list of group addresses that will
        be accepted by the station."
    ::= { agActionGrpEntry 5 }

agActionGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and
        deleting instances of the columnar objects in the agActionGrp table."
    DEFVAL { active }
    ::= { agActionGrpEntry 6 }

-- *****
--* End of agActionGrp TABLE
-- *****

-- *****
--* Resource Type Attribute Templates
-- *****

--* aResourceTypeIDName
aResourceTypeIDName OBJECT-TYPE
    SYNTAX DisplayString ("RTID")
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Contains the name of the Resource Type ID managed object.
        The attribute is read-only and always contains the value RTID.
        This attribute value shall not be used as a naming attribute

```

for any other managed object class."
 REFERENCE "IEEE STD 802.1F - 1993 p.24"
 ::= { resAttribute 1 }

-- *****

--* aResourceInfo TABLE

-- *****

aResourceInfo OBJECT-TYPE
 SYNTAX SEQUENCE OF TypeaResourceInfoEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "provides a means of indicating, in data readable from a
 managed object, information that identifies the source of the
 implementation."
 REFERENCE "IEEE STD 802.1F - 1993 p.24"
 ::= { resAttribute 2 }

aResourceInfoEntry OBJECT-TYPE
 SYNTAX TypeaResourceInfoEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "An entry in the aResourceInfo table."
 INDEX { aResourceInfoTableIndex }
 ::= { aResourceInfo 1 }

TypeaResourceInfoEntry ::= SEQUENCE {
 aResourceInfoTableIndex Integer32,
 manufacturerOUI OCTETSTRING,
 manufacturerName DisplayString,
 manufacturerProductName DisplayString,
 manufacturerProductVersion DisplayString,
 aResourceInfoStatus RowStatus }

aResourceInfoTableIndex OBJECT-TYPE
 SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "The auxillary variable used to identify instances
 of the columnar objects in the aResourceInfo table."
 ::= { aResourceInfoEntry 1 }

manufacturerOUI OBJECT-TYPE
 SYNTAX OCTETSTRING
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "takes the value of an organizationally unique identifier. "
 ::= { aResourceInfoEntry 2 }

manufacturerName OBJECT-TYPE
 SYNTAX DisplayString
 MAX-ACCESS read-write

STATUS current
 DESCRIPTION
 "Printable string used to identify the manufacturer of the resource. Max. string length is 128 Octets."
 ::= { aResourceInfoEntry 3 }

manufacturerProductName OBJECT-TYPE
 SYNTAX DisplayString
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "A printable string used to identify the manufacturer's product name of the resource. Maximum string length is 128 octets "
 ::= { aResourceInfoEntry 4 }

manufacturerProductVersion OBJECT-TYPE
 SYNTAX DisplayString
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "Printable string used to identify the manufacturer's product version of the resource. Max. string length is 128 octets."
 ::= { aResourceInfoEntry 5 }

aResourceInfoStatus OBJECT-TYPE
 SYNTAX RowStatus
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "The status column used for creating, modifying, and deleting instances of the columnar objects in the aResourceInfo table."
 DEFVAL { active }
 ::= { aResourceInfoEntry 6 }

-- *****
 --* End of aResourceInfo TABLE
 -- *****

-- *****
 -- PHY Attribute Templates
 -- *****
 -- *****
 --* agPhyOperationGrp TABLE
 -- *****

agPhyOperationGrp OBJECT-TYPE
 SYNTAX SEQUENCE OF TypeagPhyOperationGrpEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "PHY level attributes concerned with operation.
 Implemented as a table indexed on Station ID to allow for multiple instantiations on an Agent."
 ::= { phy 1 }

```

agPhyOperationGrpEntry OBJECT-TYPE
    SYNTAX TypeagPhyOperationGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the agPhyOperationGrp table."
    INDEX { agPhyOperationGrpTableIndex }
    ::= { agPhyOperationGrp 1 }

TypeagPhyOperationGrpEntry ::= SEQUENCE {
    agPhyOperationGrpTableIndex Integer32,
    aPHYType Integer32,
    aCurrentRegDomain Integer32,
    aSlotTime Integer32,
    aCCAAsmntTime Integer32,
    aRXTxTurnaroundTime Integer32,
    aTxPLCPDelay Integer32,
    aRXTxSwitchTime Integer32,
    aTxRampOnTime Integer32,
    aTxRFDelay Integer32,
    aSIFSTime Integer32,
    aRxRFDelay Integer32,
    aRxPLCPDelay Integer32,
    aMACPrctime Integer32,
    aTxRampOffTime Integer32,
    aPreambleLength Integer32,
    aPLCPHeaderLngth Integer32,
    aMPDUDurationFactor Integer32,
    aAirPropagationTime Integer32,
    aTempType Integer32,
    agPhyOperationGrpStatus RowStatus
}

agPhyOperationGrpTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the agPhyOperationGrp table."
    ::= { agPhyOperationGrpEntry 1 }

aPHYType OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This is a 8 bit integer value which identifies the PHY Type
        supported by the attached PLCP and PMD.
        FHSS 2.4GHz = 01 , DSSS 2.4GHz = 02, IR Baseband = 03"
    ::= { agPhyOperationGrpEntry 2 }

-- aCurrent_Reg_Domain
aCurrentRegDomain OBJECT-TYPE
    SYNTAX Integer32

```

MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "This octet defines the current regulatory domain this implementation of the PMD is supporting. This octet corresponds to one of the Reg_Domains list in the Reg_Domains_Suprt attribute list"
 ::= { agPhyOperationGrpEntry 3 }

-- aSlot_Time

aSlotTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The time in microseconds the MAC will use for defining the PIFS and DIFS periods. The Slot_Time is defined as a function of the following the equation:

$CCA_Asmnt_Time + RxTx_Turnaround_Time + Air_Propagation_Time.$

Air_Propagation_Time is defined as 1 usec."

::= { agPhyOperationGrpEntry 4 }

-- aCCA_Asmnt_Time

aCCAAsmntTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The minimum time in microseconds the CCA mechanism has available to assess the media within every slot to determine whether the media is clear or busy"

::= { agPhyOperationGrpEntry 5 }

-- aRxTx_Turnaround_Time

aRxTxTurnaroundTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" The maximum time in microseconds the PHY requires to change from receive to transmitting the start of the first symbol out on the air.

The following equation is used to derive the RxTx_Turnaround_Time:

$aTx_PLCP_Delay + aRxTx_Switch_Time + aTxRamp_On_Time + aTx_RF_Delay.$ "

::= { agPhyOperationGrpEntry 6 }

-- aTx_PLCP_Delay

aTxPLCPDelay OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The nominal time in microseconds the PLCP uses to deliver a symbol from the MAC interface to the transmit data path of the PMD"

::= { agPhyOperationGrpEntry 7 }

-- aRxTx_Switch_Time

```

aRxTxSwitchTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The nominal time in microseconds the PMD takes to switch from
        Receive to Transmit"
 ::= { agPhyOperationGrpEntry 8 }

-- aTxRamp_On_Time
aTxRampOnTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The maximum time in microseconds the PMD takes to turn the Transmitter on"
 ::= { agPhyOperationGrpEntry 9 }

-- aTx_RF_Delay
aTxRFDelay OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The nominal time in nanoseconds the PMD uses to transfer a symbol
        through the Transmit path of the PMD"
 ::= { agPhyOperationGrpEntry 10 }

-- aSIFS_Time
aSIFSTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The time in microseconds the MAC and PHY will require to
        receive the last symbol of a frame at the air interface,
        process the frame and response with the first symbol on the
        air interface of the earliest possible response. The
        following equation is used to determine the SIFS_Time:
        aRx_RF_Delay + aRx_PLCP_Delay + aMAC_Prc_Delay +
        aRxTx_Turnaround_Time"
 ::= { agPhyOperationGrpEntry 11 }

-- aRx_RF_Delay
aRxRFDelay OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The nominal time in nanoseconds the PMD uses to deliver a
        symbol from the antenna to the PLCP."
 ::= { agPhyOperationGrpEntry 12 }

-- aRx_PLCP_Delay
aRxPLCPDelay OBJECT-TYPE

```

```

SYNTAX Integer32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "The nominal time in nanoseconds the PLCP uses to deliver a
    bit from the PMD receive path to the MAC"
 ::= { agPhyOperationGrpEntry 13 }

-- aMAC_Prc_Time
aMACPrcTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The nominal time in microseconds the MAC uses to process
        a frame and prepare a response to the frame"
 ::= { agPhyOperationGrpEntry 14 }

-- aTxRamp_Off_Time
aTxRampOffTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The time in nanoseconds the PMD takes to turn the Transmit PA off"
 ::= { agPhyOperationGrpEntry 15 }

-- aPreamble_Length
aPreambleLength OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This is an indication of the current PHY's Preamble Length in bits. "
 ::= { agPhyOperationGrpEntry 16 }

-- aPLCP_Hdr_Lngth
aPLCPHeaderLngth OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This is an indication of the current PHY's PLCP Header Length in bits. "
 ::= { agPhyOperationGrpEntry 17 }

-- aMPDU_Duration_Factor
aMPDUDurationFactor OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The parameter aMPDU_Duration_Factor defines the overhead added by
        the PHY to the MPDU as it is transmitted over the air. "
 ::= { agPhyOperationGrpEntry 18 }

-- aAir_Propagation_Time

```



```

aAirPropagationTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The parameter aAir_Propagation_Time is the time it takes a
        transmitted signal to go from the transmitting station to the receiving station."
 ::= { agPhyOperationGrpEntry 19 }

-- aTemp_Type
aTempType OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This is an indication of the current PHY's operating
        temperature range capability. "
 ::= { agPhyOperationGrpEntry 20 }

agPhyOperationGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
        instances of the columnar objects in the agPhyOperationGrp table."
    DEFVAL { active }
    ::= { agPhyOperationGrpEntry 21 }
-- *****
--*      End of agPhyOperationGrp TABLE
-- *****

-- *****
--*      aRegDomainsSuprt TABLE
-- *****

aRegDomainsSuprt OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeaRegDomainsSuprtEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "There are different operational requirements dependent on the
        regulatory domain. This attribute list describes the
        regulatory domains the PLCP and PMD support in this
        implementation. Each integer is an 8 bit value as defined below:
        FCC = 10, DOC = 20, ETSI = 30, MKK = 40"
    ::= { phy 9 }

aRegDomainsSuprtEntry OBJECT-TYPE
    SYNTAX TypeaRegDomainsSuprtEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the aRegDomainsSuprt table."
    INDEX { aRegDomainsSuprtTableIndex, aRegDomainsSuprtIndex }
    ::= { aRegDomainsSuprt 1 }

```

```

TypeaRegDomainsSuprtEntry ::= SEQUENCE {
    aRegDomainsSuprtTableIndex  Integer32,
    aRegDomainsSuprtIndex       Integer32,
    aRegDomainsSuprtValue       Integer32,
    aRegDomainsSuprtStatus      RowStatus}

aRegDomainsSuprtTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the RegDomainsSuprtEntry table."
    ::= { aRegDomainsSuprtEntry 1 }

aRegDomainsSuprtIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the RegDomainsSuprtEntry table."
    ::= { aRegDomainsSuprtEntry 2 }

-- aReg_Domains_Suprt_Value
aRegDomainsSuprtValue OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "There are different operational requirements dependent on the
        regulatory domain. This attribute list describes the
        regulatory domains the PLCP and PMD support in this
        implementation. Each integer is an 8 bit value as defined below:
        FCC = 10, DOC = 20, ETSI = 30, MKK = 40"
    ::= { aRegDomainsSuprtEntry 3 }

aRegDomainsSuprtStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
        instances of the columnar objects in the aRegDomainsSuprt table."
    DEFVAL { active}
    ::= { aRegDomainsSuprtEntry 4 }
-- *****
--*      End of aRegDomainsSuprt TABLE
-- *****

-- *****
--*      agPhyRateGrp TABLE
-- *****
agPhyRateGrp OBJECT-TYPE

```

SYNTAX SEQUENCE OF TypeagPhyRateGrpEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Group of PHY attributes concerning PhyRate. Implemented as a Table indexed on Station ID to allow for multiple instances on an Agent."

::= { phy 2 }

agPhyRateGrpEntry OBJECT-TYPE

SYNTAX TypeagPhyRateGrpEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the agPhyRateGrp table."

INDEX { agPhyRateGrpTableIndex }

::= { agPhyRateGrp 1 }

TypeagPhyRateGrpEntry ::= SEQUENCE {

agPhyRateGrpTableIndex Integer32,
 aSuprtDataRatesTxValue Integer32,
 aSuprtDataRatesRxValue Integer32,
 aMPDUMaxLngh Integer32,
 aPrefMaxMPDUFrgmntLngh Integer32,
 agPhyRateGrpStatus RowStatus }

agPhyRateGrpTableIndex OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The auxillary variable used to identify instances of the columnar objects in the agPhyRateGrp table according to which Station ID they belong."

::= { agPhyRateGrpEntry 1 }

aSuprtDataRatesTxValue OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The Transmit bit rate supported by the PLCP and PMD. The folowing list defines the supported data rates:

1M bps = 01, 2M bps = 02, separate table entries for Transmit and Receive"

::= { agPhyRateGrpEntry 2 }

aSuprtDataRatesRxValue OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The Receive bit rate supported by the PLCP and PMD. The folowing list defines the supported data rates:

1M bps = 01, 2M bps = 02, separate table entries for Transmit and Receive"

DEFVAL { NULL }

```

 ::= { agPhyRateGrpEntry 3 }

-- aMPDU_Max_Lngth
aMPDUMaxLngth OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The maximum number of octets in a MPDU that can be load into
        the PLCP_PDU when transmitting "
    ::= { agPhyRateGrpEntry 4 }

-- aPref_Max_MPDU_Frgmnt_Lngth
aPrefMaxMPDUFrgmntLngth OBJECT-TYPE
    SYNTAX Integer32
    -- originally defined as: Null Terminated list of byte integers
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The aPref_Max_MPDU_Frgmnt_Lngth managed object is the
        recommended maximum fragment length in octets."
    ::= { agPhyRateGrpEntry 5 }

agPhyRateGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and
        deleting instances of the columnar objects in the
        agPhyRateGrp table."
    DEFVAL { active }
    ::= { agPhyRateGrpEntry 6 }
-- *****
--*      End of agPhyRateGrp TABLE
-- *****

-- *****
--*      agAntennasList TABLE
-- *****

agAntennasList OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeagAntennasListEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "This attribute represent a list of one or more antennas which
        can be used as the transmit, Receive or Deiversity_select_Rx
        antenna. Each antenna is define as an integer starting with
        antenna 1 to antenna N where N is < or = 255"
    ::= { phy 11 }

agAntennasListEntry OBJECT-TYPE
    SYNTAX TypeagAntennasListEntry
    MAX-ACCESS not-accessible
    STATUS current

```

DESCRIPTION

"An entry in the agAntennasList table."

INDEX { agAntennasListTableIndex, agAntennasListIndex }
 ::= { agAntennasList 1 }

```
TypeagAntennasListEntry ::= SEQUENCE {
    agAntennasListTableIndex      Integer32,
    agAntennasListIndex           Integer32,
    aSuprtTxAntennas              Integer32,
    aSuprtRxAntennas              Integer32,
    aDiversitySlctRx              Integer32,
    agAntennasListStatus          RowStatus }
```

agAntennasListTableIndex OBJECT-TYPE

SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "The auxillary variable used to identify instances
 of the columnar objects in the agAntennasList table."
 ::= { agAntennasListEntry 1 }

agAntennasListIndex OBJECT-TYPE

SYNTAX Integer32
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "The auxillary variable used to identify instances
 of the columnar objects in the agAntennasList table."
 ::= { agAntennasListEntry 2 }

aSuprtTxAntennas OBJECT-TYPE

SYNTAX Integer32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "This attribute represents an antenna which
 can be used as the transmit antenna. Each antenna is define
 as an integer starting with antenna 1 to antenna N where N is < or = 255"
 DEFVAL { NULL }
 ::= { agAntennasListEntry 3 }

aSuprtRxAntennas OBJECT-TYPE

SYNTAX Integer32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "This attribute represents an antenna which
 can be used as the receive antenna. Each antenna is define
 as an integer starting with antenna 1 to antenna N where N is < or = 255"
 DEFVAL { NULL }
 ::= { agAntennasListEntry 4 }

aDiversitySlctRx OBJECT-TYPE

SYNTAX Integer32

```

MAX-ACCESS read-write
STATUS current
DESCRIPTION
    "This attribute represents an antenna which
    can be used as receive antenna. Each antenna is define
    as an integer starting with antenna 1 to antenna N where N is < or = 255"
DEFVAL {NULL}
 ::= { agAntennasListEntry 5 }

agAntennasListStatus OBJECT-TYPE
SYNTAX RowStatus
MAX-ACCESS read-create
STATUS current
DESCRIPTION
    "The status column used for creating, modifying, and
    deleting instances of the columnar objects in the agAntennasList table."
DEFVAL {active}
 ::= { agAntennasListEntry 6 }
-- *****
--*      End of agAntennasList TABLE
-- *****

-- *****
--*      agPhyAntennaGrp TABLE
-- *****
agPhyAntennaGrp OBJECT-TYPE
SYNTAX SEQUENCE OF TypeagPhyAntennaGrpEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
    "Group of attributes for PhyAntenna. Implemented
    as a Table indexed on Station ID to allow for multiple
    instances on an Agent."
 ::= { phy 3}

agPhyAntennaGrpEntry OBJECT-TYPE
SYNTAX TypeagPhyAntennaGrpEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
    "An entry in the agPhyAntennaGrp table."
INDEX {agPhyAntennaGrpTableIndex}
 ::= { agPhyAntennaGrp 1 }

TypeagPhyAntennaGrpEntry ::= SEQUENCE {
    agPhyAntennaGrpTableIndex      Integer32,
    aCurrentTxAntenna              Integer32,
    aDiversitySuprt                Integer32,
    agPhyAntennaGrpStatus         RowStatus }

agPhyAntennaGrpTableIndex OBJECT-TYPE
SYNTAX Integer32
MAX-ACCESS read-write
STATUS current
DESCRIPTION

```

"The auxillary variable used to identify instances of the columnar objects in the agPhyAntennaGrp table according to which Station ID they belong."
 ::= { agPhyAntennaGrpEntry 1 }

```
-- aCurrent_Tx_Antenna
aCurrentTxAntenna OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The current antenna being used to transmit. This value is one of
        the attributes appearing in the list defined as the Suprt_Tx_Antennas."
    ::= { agPhyAntennaGrpEntry 2 }
```

```
-- aDiversity_Suprt
aDiversitySuprt OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This attribute defines this implementation's support for
        diversity. This attribute can have one of three values. 11h
        indicates that diversity is available and performed over a
        fixed list of antennas define in attribute Diversity_Slct_Rx.
        02h indicates that diversity is not supported. 03h indicates
        that diversity is supported and that control of diversity is
        also available. Diversity control indicates that the
        Diversity_Slct_Rx can be dynamically modified by the LME."
    ::= { agPhyAntennaGrpEntry 3 }
```

```
agPhyAntennaGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and
        deleting instances of the columnar objects in the
        agPhyAntennaGrp table."
    DEFVAL { active }
    ::= { agPhyAntennaGrpEntry 4 }
```

```
-- *****
--*      End of agPhyAntennaGrp TABLE
-- *****
```

```
-- *****
--*      agPhyTxPwrGrp TABLE
-- *****
```

```
agPhyTxPwrGrp OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeagPhyTxPwrGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Group of attributes for agPhyTxPwrGrp.
        Implemented as a Table indexed on Station ID to allow for
```

```

        multiple instances on an Agent."
 ::= { phy 4 }

agPhyTxPwrGrpEntry OBJECT-TYPE
    SYNTAX TypeagPhyTxPwrGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the agPhyTxPwrGrp table."
    INDEX { agPhyTxPwrGrpTableIndex }
    ::= { agPhyTxPwrGrp 1 }

TypeagPhyTxPwrGrpEntry ::= SEQUENCE {
    agPhyTxPwrGrpTableIndex      Integer32,
    aNbrSuprtPwrLvls             Integer32,
    aTxPwrLvl1                   Integer32,
    aTxPwrLvl2                   Integer32,
    aTxPwrLvl3                   Integer32,
    aTxPwrLvl4                   Integer32,
    aTxPwrLvl5                   Integer32,
    aTxPwrLvl6                   Integer32,
    aTxPwrLvl7                   Integer32,
    aTxPwrLvl8                   Integer32,
    aCurrentTxPwrLvl             Integer32,
    agPhyTxPwrGrpStatus          RowStatus }

agPhyTxPwrGrpTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the agPhyTxPwrGrp table according to which
        Station ID they belong."
    ::= { agPhyTxPwrGrpEntry 1 }

-- aNbr_Suprt_Pwr_Lvls
aNbrSuprtPwrLvls OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This defines the number of power levels supported by the PMD.
        This attribute can have a value of 1 to 8."
    ::= { agPhyTxPwrGrpEntry 2 }

-- aTx_Pwr_Lvl_1
aTxPwrLvl1 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This defines the transmit output power for LEVEL1 in mWatts.
        This is also the default power level."
    ::= { agPhyTxPwrGrpEntry 3 }

```



```
-- aTx_Pwr_Lvl_2
aTxPwrLvl2 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This defines the transmit output power for LEVEL2 in mWatts."
 ::= { agPhyTxPwrGrpEntry 4 }

-- aTx_Pwr_Lvl_3
aTxPwrLvl3 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This defines the transmit output power for LEVEL3 in mWatts."
 ::= { agPhyTxPwrGrpEntry 5 }

-- aTx_Pwr_Lvl_4
aTxPwrLvl4 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This defines the transmit output power for LEVEL4 in mWatts."
 ::= { agPhyTxPwrGrpEntry 6 }

-- aTx_Pwr_Lvl_5
aTxPwrLvl5 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This defines the transmit output power for LEVEL5 in mWatts."
 ::= { agPhyTxPwrGrpEntry 7 }

-- aTx_Pwr_Lvl_6
aTxPwrLvl6 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This defines the transmit output power for LEVEL6 in mWatts."
 ::= { agPhyTxPwrGrpEntry 8 }

-- aTx_Pwr_Lvl_7
aTxPwrLvl7 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This defines the transmit output power for LEVEL7 in mWatts."
 ::= { agPhyTxPwrGrpEntry 9 }
```

```

-- aTx_Pwr_Lvl_8
aTxPwrLvl8 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This defines the transmit output power for LEVEL8 in mWatts."
    ::= { agPhyTxPwrGrpEntry 10 }

-- aCurrent_Tx_PwrLvl
aCurrentTxPwrLvl OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The Tx_Pwr_Lvl_N currently being used to transmit data. Some
        PHYs also use this value to determine the receiver sensitivity
        requirements for CCA. "
    ::= { agPhyTxPwrGrpEntry 11 }

agPhyTxPwrGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
        instances of the columnar objects in the agPhyTxPwrGrp table."
    DEFVAL { active }
    ::= { agPhyTxPwrGrpEntry 12 }
-- *****
--*      End of agPhyTxPwrGrp TABLE
-- *****

-- *****
--*      agPhyFHSSGrp TABLE
-- *****

agPhyFHSSGrp OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeagPhyFHSSGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Group of attributes for agPhyFHSSGrp.
        Implemented as a Table indexed on Station ID to allow for
        multiple instances on an Agent."
    ::= { phy 5 }

agPhyFHSSGrpEntry OBJECT-TYPE
    SYNTAX TypeagPhyFHSSGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the agPhyFHSSGrp table."
    INDEX {agPhyFHSSGrpTableIndex}
    ::= { agPhyFHSSGrp 1 }

```

```

TypeagPhyFHSSGrpEntry ::= SEQUENCE {
    agPhyFHSSGrpTableIndex      Integer32,
    aHopTime                     Integer32,
    aCurrentChannelNbr          Integer32,
    aMaxDwellTime               Integer32,
    aCurrentDwellTime           Integer32,
    aCurrentSet                  Integer32,
    aCurrentPattern              Integer32,
    aCurrentIndex                Integer32,
    agPhyFHSSGrpStatus          RowStatus }

agPhyFHSSGrpTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances
        of the columnar objects in the agPhyFHSSGrp table according to which
        Station ID they belong."
 ::= { agPhyFHSSGrpEntry 1 }

-- aHop_Time
aHopTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The time in nanoseconds for PMD to change from channel 2 to 80"
 ::= { agPhyFHSSGrpEntry 2 }

-- aCurrent_Channel_Nbr
aCurrentChannelNbr OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This defines the current channel number of the frequency
        loaded in the RF synthesizer"
 ::= { agPhyFHSSGrpEntry 3 }

-- aMax_Dwell_Time
aMaxDwellTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The maximum time in nanoseconds that the radio can
        operate on a single channel"
 ::= { agPhyFHSSGrpEntry 4 }

-- aCurrent_Dwell_Time
aCurrentDwellTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current

```

```

        DESCRIPTION
            "The current time in nanoseconds that the radio shall
            operate on a single channel set by the MAC"
 ::= { agPhyFHSSGrpEntry 5 }

-- aCurrent_Set
aCurrentSet OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This attribute represents the current set of patterns the PHY
        LME is using to determine the hop sequence."
 ::= { agPhyFHSSGrpEntry 6 }

-- aCurrent_Pattern
aCurrentPattern OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This attribute represents the current pattern the PHY LME is
        using to determine the hop sequence."
 ::= { agPhyFHSSGrpEntry 7 }

-- aCurrent_Index
aCurrentIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This attribute represents the current index value the PHY
        LME is using to determine the Current_Channel_Nbr."
 ::= { agPhyFHSSGrpEntry 8 }

agPhyFHSSGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
        instances of the columnar objects in the agPhyFHSSGrp table."
    DEFVAL {active}
 ::= { agPhyFHSSGrpEntry 9 }
-- *****
--*      End of agPhyFHSSG TABLE
-- *****

-- *****
--*      agPhyDSSSGrp TABLE
-- *****

agPhyDSSSGrp OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeagPhyDSSSGrpEntry
    MAX-ACCESS not-accessible
    STATUS current

```

DESCRIPTION

"Group of attributes for agPhyDSSSGrp.
Implemented as a Table indexed on Station ID to allow for
multiple instances on an Agent."

::= { phy 6 }

agPhyDSSSGrpEntry OBJECT-TYPE

SYNTAX TypeagPhyDSSSGrpEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the agPhyDSSSGrp table."

INDEX { agPhyDSSSGrpTableIndex }

::= { agPhyDSSSGrp 1 }

TypeagPhyDSSSGrpEntry ::= SEQUENCE {

agPhyDSSSGrpTableIndex	Integer32,
aCurrentChannel	Integer32,
aCCAModeSuprt	Integer32,
aCurrentCCAMode	Integer32,
aEDThreshold	Integer32,
agPhyDSSSGrpStatus	RowStatus }

agPhyDSSSGrpTableIndex OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The auxillary variable used to identify instances of the
columnar objects in the agPhyDSSSGrp table according to which
Station ID they belong."

::= { agPhyDSSSGrpEntry 1 }

-- aCurrent_Channel

aCurrentChannel OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This is an indication of the current operating frequency
channel of the DSSS PHY. "

::= { agPhyDSSSGrpEntry 2 }

-- aCCA_Mode_Suprt

aCCAModeSuprt OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is an indication of the DSSS PHY CCA modes which are supported. "

::= { agPhyDSSSGrpEntry 3 }

-- aCurrent_CCA_Mode

aCurrentCCAMode OBJECT-TYPE

SYNTAX Integer32

```

MAX-ACCESS read-write
STATUS current
DESCRIPTION
    "This is an indication of the current CCA method in operation. "
 ::= { agPhyDSSSSGrpEntry 4 }

```

```

-- aED_Threshold
aEDThreshold OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This is an indication of the current Energy Detect Threshold
        being used by the DSSS PHY. "
 ::= { agPhyDSSSSGrpEntry 5 }

```

```

agPhyDSSSSGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
        instances of the columnar objects in the agPhyDSSSSGrp table."
    DEFVAL { active}
    ::= { agPhyDSSSSGrpEntry 6 }

```

```

-- *****
--*      End of agPhyDSSSSGrp TABLE
-- *****

```

```

-- *****
--*      agPhyStatusGrp TABLE
-- *****

```

```

agPhyStatusGrp OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeagPhyStatusGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Group of attributes for agPhyStatusGrp.
        Implemented as a Table indexed on Station ID to allow for
        multiple instances on an Agent."
    ::= { phy 7 }

```

```

agPhyStatusGrpEntry OBJECT-TYPE
    SYNTAX TypeagPhyStatusGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the agPhyStatusGrp table."
    INDEX { agPhyStatusGrpTableIndex }
    ::= { agPhyStatusGrp 1 }

```

```

TypeagPhyStatusGrpEntry ::= SEQUENCE {
    agPhyStatusGrpTableIndex      Integer32,
    aSynthesizerLocked            Integer32,
    agPhyStatusGrpStatus          RowStatus }

```

```

agPhyStatusGrpTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances of the
        columnar objects in the agPhyStatusGrp table according to
        which Station ID they belong."
    ::= { agPhyStatusGrpEntry 1 }

-- aSynthesizer_Lockeda
aSynthesizerLocked OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This is an indication that the PMD's synthesizer is locked
        to the current channel specified in the Current_Channel_Nbr.
        00h represents unlocked while FFh represents locked. "
    ::= { agPhyStatusGrpEntry 2 }

agPhyStatusGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
        instances of the columnar objects in the agPhyStatusGrp table."
    DEFVAL { active}
    ::= { agPhyStatusGrpEntry 3 }
-- *****
--*      End of agPhyStatusGrp TABLE
-- *****

-- *****
--*      agPhyPwrSavingGrp TABLE
-- *****
agPhyPwrSavingGrp OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeagPhyPwrSavingGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Group of attributes for agPhyPwrSavingGrp.
        Implemented as a Table indexed on Station ID to allow for
        multiple instances on an Agent."
    ::= { phy 8}

agPhyPwrSavingGrpEntry OBJECT-TYPE
    SYNTAX TypeagPhyPwrSavingGrpEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the agPhyPwrSavingGrp table."
    INDEX {agPhyPwrSavingGrpTableIndex }

```

```
::= { agPhyPwrSavingGrp 1 }
```

```
TypeagPhyPwrSavingGrpEntry ::= SEQUENCE {
    agPhyPwrSavingGrpTableIndex Integer32,
    aCurrentPowerState          Integer32,
    aSleepTurnonTime            Integer32,
    aDozeTurnonTime             Integer32,
    aCCAWatchDogTimerMax        Integer32,
    aCCAWatchDogCountMax        Integer32,
    aCCAWatchDogTimerMin        Integer32,
    aCCAWatchDogCountMin        Integer32,
    agPhyPwrSavingGrpStatus     RowStatus }
```

```
agPhyPwrSavingGrpTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The auxillary variable used to identify instances of the
        columnar objects in the agPhyPwrSavingGrp table according to
        which Station ID they belong."
    ::= { agPhyPwrSavingGrpEntry 1 }
```

```
-- aCurrent_Power_State
aCurrentPowerState OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "This is an indication of the current power state of the PHY."
    ::= { agPhyPwrSavingGrpEntry 2 }
```

```
--- aSleep_Turnon_Time
aSleepTurnonTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This is an indication of the time in microseconds required by
        the PHY to progress from the SLEEP power down state to the
        ACTIVE operating state. "
    ::= { agPhyPwrSavingGrpEntry 3 }
```

```
-- aDoze_Turnon_Time
aDozeTurnonTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This is an indication of the time in microseconds required by
        the PHY to progress from the Doze power down state to the
        ACTIVE operating state. "
    ::= { agPhyPwrSavingGrpEntry 4 }
```



```

aCCAWatchDogTimerMax OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION " "
    ::= { agPhyPwrSavingGrpEntry 5 }

aCCAWatchDogCountMax OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION " "
    ::= { agPhyPwrSavingGrpEntry 6 }

aCCAWatchDogTimerMin OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION " "
    ::= { agPhyPwrSavingGrpEntry 7 }

aCCAWatchDogCountMin OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION " "
    ::= { agPhyPwrSavingGrpEntry 8 }

agPhyPwrSavingGrpStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
        instances of the columnar objects in the agPhyPwrSavingGrp table."
    DEFVAL { active }
    ::= { agPhyPwrSavingGrpEntry 9 }
-- *****
--*      End of agPhyPwrSavingGrp TABLE
-- *****

-- *****
--*      Beginning of aStationID TABLE
-- *****
-- Table to link StationID values to a particular Index for all other MIB tables
-- agStationIDTable OBJECT IDENTIFIER ::= { ieee802dot11 5 }

aStationIDTable OBJECT-TYPE
    SYNTAX SEQUENCE OF TypeaStationIDTableEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Station Configuration attributes. In tabular form to
        allow for multiple instances on a Agent"
    ::= { agStationIDTable 1 }

```

```

aStationIDTableEntry OBJECT-TYPE
    SYNTAX TypeaStationIDTableEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the aStationIDTable table."
    INDEX { aStationIDTableIndex }
    ::= { aStationIDTable 1 }

TypeaStationIDTableEntry ::=
    SEQUENCE {
        aStationIDTableIndex    Integer32,
        aStationIDTableStationIDMacAddress,
        aStationIDTableStatus    RowStatus }

aStationIDTableIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The index used to access rows in the aStationIDTable table
         it is associated with a particular StationID as a MAC Address. "
    ::= { aStationIDTableEntry 1 }

--*      aStationID
aStationIDTableStationID OBJECT-TYPE
    SYNTAX MacAddress
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "A unique StationID specifying a local Station (radio card).
         Agents can contain multiple Stations, and this table
         links each stationID with a unique index. This index is used
         to access all the tables of the ieee 802.11 MIB."
    ::= { aStationIDTableEntry 2 }

aStationIDTableStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and deleting
         instances of the columnar objects in the aStationIDTable table."
    DEFVAL { active }
    ::= { aStationIDTableEntry 3 }

-- *****
--*      End of aStationID TABLE
-- *****
--*
--*
--*      End of 80211 MIB
END

```